

WHAT IS CLAIMED IS:

1. A polarization means used for

a three-dimensional image display apparatus comprising:
5 an image display section for displaying image information
corresponding to parallax in a first region and a second region,
and a first phase retardation plate which is provided facing
said first region and said second region of said image display
section and rotates a polarization direction of a polarized
10 light of said image information from said first region in a
direction different from a polarization direction of a
polarized light of said image information from said second
region, and

said polarization means comprising a second phase
15 retardation plate having a first area and a second area which
allow respective polarized lights separated by said first phase
retardation plate to enter, said second phase retardation plate
for rotating polarized lights in a direction opposite to that
of said first phase retardation plate being provided in said
20 first area or said second area on the image display section
side.

2. The polarization means according to claim 1, wherein said
first phase retardation plate and said second phase retardation
25 plate are respectively made of half wave plates, and said
respective polarized lights separated by said first phase
retardation plate are entered through or not through said
second phase retardation plate into said first area and said
second area respectively.

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3. The polarization means according to claim 1, wherein at

least a portion where said second phase retardation plate is located is coated with a transparent protection material.

4. The polarization means according to claim 1, wherein a position of said polarization means is changeable so that a surface on the side where said second phase retardation plate is provided faces either a three-dimensional image observation side or said image display section side.

5. The polarization means according to claim 1, wherein said polarization means is held by a position holding means for holding a distance and parallelism between said first phase retardation plate and said polarization means, and for aligning the center of said first phase retardation plate with said polarization means.

6. The polarization means according to claim 5, wherein said polarization means is attached so as to be detachable or undetachable from said position holding means, or wherein said position holding means is attached so as to be detachable or undetachable.

7. The polarization means according to claim 5, wherein said polarization means is held at one end of an arm part of said position holding mechanism fixed to a frame section of said image display section.

8. The polarization means according to claim 5, wherein position adjustment of said polarization means is carried out by a click type position adjustment means.

9. The polarization means according to claim 7, wherein the other end of said arm part is fixed to said frame section of said image display section through the click type position adjustment means.

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10. The polarization means according to claim 6, wherein said polarization means is position-changeable in the forward/rearward direction and/or in the left/right direction.

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11. The polarization means according to claim 10, wherein said polarization means is turnable with respect to said first phase retardation plate in the forward/rearward direction and/or in the left/right direction.

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12. The polarization means according to claim 7, wherein said arm part is stretchable in the forward/rearward direction.

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13. The polarization means according to claim 1, wherein said image display section is arranged to be adjustable in angle.

14. The polarization means according to claim 1, wherein said polarization means is held and fixed in front of a viewer, and said first area and said second area are respectively located at the left eye and the right eye of said viewer.

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15. The polarization means according to claim 14, wherein said polarization means is provided as a pair of polarized glasses.

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16. The polarization means according to claim 14, wherein

said polarization means is reversed back to front with respect to said viewer by altering position of a holding and fixing section with respect to said viewer.

- 5 17. A position holding mechanism for a polarization means, comprising:

the polarization means used for a three-dimensional image display apparatus including:

an image display section for displaying image
10 information corresponding to parallax in a first region and a second region; and

a first phase retardation plate which is provided facing said first region and said second region of said image display section and rotates a polarization direction of a
15 polarized light of said image information from said first region in a direction different from a polarization direction of a polarized light of said image information from said second region,

a second phase retardation plate having a first
20 area and a second area which allow respective polarized lights separated by said first phase retardation plate to enter, said second phase retardation plate for rotating polarized lights in a direction opposite to that of said first phase retardation plate being provided in said first area or said second area
25 on the image display section side; and

the position holding means for holding said polarization means at one end, holding a distance and parallelism between said polarization means and said first phase retardation plate, and aligning them.

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18. The position holding mechanism for the polarization means

according to claim 17, wherein said first phase retardation plate and said second phase retardation plate are respectively made of the half wave plates, and said respective polarized lights separated by said first phase retardation plate are entered through or not through said second phase retardation plate into said first area and said second area respectively.

19. The position holding mechanism for the polarization means according to claim 17, wherein at least a portion where said second phase retardation plate is located in said polarization means is coated with a transparent protection material.

20. The position holding mechanism for the polarization means according to claim 17, wherein a position of said polarization means is changeable so that a surface on the side where said second phase retardation plate is provided faces either a three-dimensional image observation side or said image display section side.

21. The position holding mechanism for the polarization means according to claim 17, wherein said polarization means is attached so as to be detachable or undetachable from said position holding means, or wherein said position holding means is attached so as to be detachable or undetachable.

22. The position holding mechanism having a polarizing plate according to claim 17, wherein said polarization means is held at one end of an arm part of said position holding mechanism fixed to a frame section of said image display section.

23. The position holding mechanism for the polarization means

according to claim 17, wherein position adjustment of said polarization means is carried out by a click type position adjustment means.

5 24. The position holding mechanism for the polarization means according to claim 22, wherein the other end of said arm part is fixed to said frame section of said image display section through the click type position adjustment means.

10 25. The position holding mechanism for the polarization means according to claim 17, wherein said polarization means is position-changeable in the forward/rearward direction and/or in the left/right direction.

15 26. The position holding mechanism for the polarization means according to claim 25, said polarization means is turnable with respect to said first phase retardation plate in the forward/rearward direction and/or in the left/right direction.

20 27. The position holding mechanism for the polarization means according to claim 22, wherein said arm part is stretchable in the forward/rearward direction.

25 28. The position holding mechanism for the polarization means according to claim 17, wherein said polarization means is held and fixed in front of a viewer and said first area and said second area are respectively located at the left eye and the right eye of said viewer.

30 29. The position holding mechanism for the polarization means

according to claim 28, wherein said polarization means is provided as a polarizing plate.

30. The position holding mechanism for the polarization means
5 according to claim 28, wherein said polarization means are reversed back to front with respect to said viewer by altering position of a holding and fixing section with respect to said viewer.